

IN THE CLAIMS:

1. (currently amended) A PWM driving apparatus comprising:
 - a PWM signal generating unit for generating first PWM signals and second PWM signals;
 - a first load-driving circuit which performs switching of power-supplying to a first load based on said first PWM signals; and
 - a second load-driving circuit which performs switching of power-supplying to a second load based on said second PWM signals,

wherein said PWM signal generating unit comprises a duty setting portion for setting a duty based on command signals, a phase difference setting portion for setting a phase difference based on said duty, and a PWM signal generating portion for generating said first PWM signals and said second PWM signals based on said duty and said phase difference, and

whereby the phase difference between said first PWM signals and said second PWM signals is configured to be changed according to said duty set by said duty setting portion.
2. (original) The PWM driving apparatus according to claim 1, wherein
 - a following formula is satisfied:
$$\phi \text{ (degree)} = 360 \text{ (degree)} \times D \text{ (\%)} / 100 \text{ (\%)}$$
if said phase difference is ϕ (unit is degree) and said duty is D (unit is %).
3. (original) The PWM driving apparatus according to claim 1, wherein
 - a following formula is satisfied:
$$\phi \text{ (degree)} = 360 \text{ (degree)} - \{ 360 \text{ (degree)} \times D \text{ (\%)} / 100 \text{ (\%)}\}$$
if said phase difference is ϕ (unit is degree) and said duty is D (unit is %).
4. (currently amended) A PWM driving apparatus comprising:
 - a PWM signal generating unit for generating first PWM signals and second PWM signals;
 - a first load-driving circuit which performs switching of power-supplying to a first load based on said first PWM signals; and
 - a second load-driving circuit which performs switching of power-supplying to a second load based on said second PWM signals,

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wherein said PWM signal generating unit comprises a carrier signal generator for generating carrier signals which are in a saw-tooth wave pattern, a first comparator for generating the first PWM signals by comparing said carrier signals with command signals, a reverser for generating reversal carrier signals in which said carrier signals are reversed, and a second comparator for generating the second PWM signals by comparing said reversal carrier signals with said command signals, and

wherein said first PWM signals and said second PWM signals are generated such that falling timing of one of said first PWM signals and said second PWM signals and rising timing of the other of said first PWM signals and said second PWM signals coincide with each other.

5. (previously presented) The PWM driving apparatus according to claim 1, wherein said first load and said second load are motor fans for being mounted in a vehicle.

6. (previously presented) The PWM driving apparatus according to claim 4, wherein said first load and said second load are motor fans for being mounted in a vehicle.

7. (new) The PWM driving apparatus according to claim 1, wherein the phase difference between said first PWM signals and said second PWM signals is configured to be changed such that falling timing of one of said first PWM signals and said second PWM signals and rising timing of the other of said first PWM signals and said second PWM signals coincide with each other.